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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,116	01/16/2004	Kiyofumi Hiroi	041230-0307652	5010

909 7590 11/02/2006

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EXAMINER

HUSON, MONICA ANNE

ART UNIT PAPER NUMBER

1732

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,116

Applicant(s)

HIROI ET AL.

Examiner

Monica A. Huson

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/984,062.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 081506,081706.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to the Amendment filed 15 August 2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mains (U.S. Patent 1,824,825), in view of Masato et al. (JP 07-205231). Regarding Claim 1, Mains shows that it is known to carry out a molding process for producing a disk shape resin molded article comprising a rim forming peripheral area, a boss forming a concentric inner area, and a web having a disk configuration for connecting the rim and the boss (Figure 5), comprising placing a resin into a cavity of a metal mold (Page 2, lines 4-13, 33-36), and pressing, in the molding process, a web site and at least one site selected from the group consisting of a boss site and a rim site in a thickness direction (Page 2, lines 33-42, 63-69). Mains does not specifically show the claimed relative injection mold movements. Masato et al., hereafter "Masato," show that it is known to carry out a method including injecting into a metal mold comprising a fixed mold member, a movable member disposed movably relative to the fixed mold member, a pressing core movably disposed or faced to at least one lateral side of the web, and a center pin disposed movably to insert into the bore of the boss and to contact with the lateral surface of the boss (Abstract; Figure 1), said metal mold members, said pressing core, and said center pin form the closed cavity by forward movement in a thickness direction,

and said cavity has a capacity larger than a volume of the final molded article by a contraction volume of the injected resin (Figure 1; Para. 0019-0024), wherein the pressing core is advanced to an original position separated from the fixed mold member with a distance corresponding to the volume of the injected molten resin, the molten resin is injected into said cavity in response to the completion of the advanced movement of the pressing core to the original position, and the pressing core is further advanced to a predetermined position which corresponds to the contraction volume or shrinking amount of the injected molten resin in response to the injection of the molten resin (Figure 1, 7; Para. 0019-0024, 0030-0031), and wherein, in the molding process, the website and an outer edge side of the boss are pressed in a thickness direction (Figures 1-5, 7). Masato and Mains are combinable because they are concerned with a similar technical field, namely, methods of injection compression molding. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Masato's relative mold placements and movements during Mains' molding process in order to enable the focus of individual compression steps on selected areas of the molded article.

Regarding Claim 4, Mains shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein said web comprises a middle circular site and an inclined area extending inwardly or outwardly from the middle circular site toward the rim and the boss with increasing thickness (Figure 5), meeting applicant's claim.

Regarding Claim 5, Mains shows the process as claimed as discussed in the rejection of Claim 4 above, including a method wherein said middle circular site has a uniform thickness, and said inclined area is formed circumferentially with extending inwardly and outwardly from the middle circular site toward the rim and the boss with increasing thickness (Figure 5), meeting applicant's claim.

Regarding Claim 6, Mains shows the process as claimed as discussed in the rejection of Claim 4 above, including a method wherein the thickness of said inclined area gradually increases toward the rim and the boss (Figure 5), meeting applicant's claim.

Regarding Claim 7, Mains shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the disk shape resin molded article comprises a rim forming a peripheral circumference area, a boss forming a concentric inner area, a web having a disk configuration for connecting the rim and the boss, and outer teeth formed on the rim (Figure 5; Page 3, lines 34-35), meeting applicant's claim.

Regarding Claim 8, Mains shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the molded article is a resin molded gear (Page 2, lines 33-36), meeting applicant's claim.

Regarding Claim 9, Mains shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the molded article is formed with an engineering plastic (Page 2, lines 33-36; Page 3, lines 102-105), meeting applicant's claim.

Response to Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

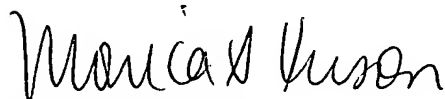
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply

is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monica A Huson

October 27, 2006



CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

10/27/06